

Serial No.: 09/020,716
Group Art Unit:

Please delete "such as from sunflower seed " on page 13, lines 1-2.

In the Claims

Please cancel Claims 1, 2, 3, 4, 5, 8, 9 10, 11, 12, 13, 18, 19, and 20 without prejudice.

Please add the following new claims:

-- 22. A transformed cereal plant seed, the endosperm of which contains an elevated level of preselected amino acids compared to a corresponding untransformed cereal plant seed, wherein the amino acids are lysine and a sulfur containing amino acid. --

--23. The seed according to Claim 4, further comprising elevated levels of threonine, tryptophan, arginine, valine, leucine, isoleucine or histidine.--

--24. The seed according to Claim 22, wherein the plant is selected from the group consisting of maize, wheat, rice, barley, oat, sorghum, millet and rye.--

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--25. The seed according to Claim 7 wherein the protein is barley alpha hordothionin, soybean 2S albumin protein (ESA), or a derivative of each protein.--

--26. The seed according to Claim 22 wherein the amount of each preselected amino acid in the seed is increased at least about 10 percent by weight compared to a corresponding seed which has not been transformed.--

--27. The seed according to Claim 9, wherein the amount of the preselected amino acid in the seed is increased about 10 percent by weight to about 1000 percent by weight compared to a corresponding seed which has not been transformed.--

-- 28. The seed according to Claim 27, wherein the amount of the preselected amino acid in the seed is increased about 15 percent by weight to about 1000 percent by weight compared to a corresponding seed which has not been transformed.--

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—29. The seed according to Claim 28, wherein the amount of the preselected amino acid in the seed is increased about 20 percent by weight to about 1000 percent by weight compared to a corresponding seed which has not been transformed.—

—30. An expression cassette comprising a seed endosperm-preferred promoter operably linked to a structural gene encoding a polypeptide elevated in content of lysine and a sulfur containing amino acid. —

—31. The expression cassette of Claim 30, wherein the polypeptide further comprises elevated levels of threonine, tryptophan, arginine, valine, leucine, isoleucine or histidine. —

—32. A seed product obtained from the transformed seed of Claim 22.--

—33. The seed product of claim 32 comprising meal, flour, grits, hominy, porridge or feed.

—33. A seed from a cereal plant which has been transformed to express an elevated level of lysine and a sulfur containing amino acid. —

—34. A method for increasing the nutritional value of cereal plant seeds comprising: transforming a plant cell with a vector comprising an expression cassette comprising a seed endosperm-preferred promoter operably linked to a structural gene encoding a polypeptide elevated in content of a preselected amino acid; regenerating a transformed plant from the cell; and growing the plant to produce seeds.—

REMARKS

Reconsideration of the present application is respectfully requested.

The present application discloses and claims transformed cereal plants and seeds having elevated levels of at least one preselected amino acid in the endosperm, the preselected amino acids being lysine and a sulfur containing amino acid.

Claims 1, 3, 5, 8-13, 18 and 19-20 have been rewritten as new claims 22, 23, 24, 25-30, 32 and 33-34, respectively.